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Attention-Deficit/Hyperactivity Disorder

Is ADD Something New?

References to ADD-type symptoms have been found in the medical literature for almost 100 years. In fact, this syndrome is one of the most widely researched of all childhood disorders. Scientific experts have long understood ADD as a disability that can and does cause serious lifelong problems, particularly when nothing is done to manage the difficulties associated with the disorder.

Throughout all these years of research, the children with ADD have not changed. The characteristics of ADD evident 40 years ago are still the same seen today. It is our understanding of ADD that has evolved. The knowledge we have gained through research has, in fact, led to a change in the disorder's name and in the way it is viewed.

What is Attention Deficit Disorder?

ADD is officially called Attention- Deficit/Hyperactivity Disorder, or AD/HD (American Psychiatric Association, 1994), although most lay people, and even some professionals, still call it ADD (the name given in 1980). The disorder's name has changed as a result of scientific advances and the findings of careful field trials; researchers now have strong evidence to support the position that AD/HD (as we will refer to the disorder throughout the remainder of this Briefing Paper) is not one specific disorder with different variations. In keeping with this evidence, AD/HD is now divided into three subtypes, according to the main features associated with the disorder: inattentiveness, impulsivity, and hyperactivity. The three subtypes are:

- AD/HD Predominantly Combined Type,
- AD/HD Predominantly Inattentive Type, and
- AD/HD Predominantly Hyperactive-Impulsive Type.

These subtypes take into account that some children with AD/HD have little or no trouble sitting still or inhibiting behavior, but may be predominantly inattentive and, as a result, have great difficulty getting or staying focused on a task or activity. Others with AD/HD may be able to pay attention to a task but lose focus because they may be predominantly hyperactive-impulsive and, thus, have trouble controlling impulse and activity. The most prevalent subtype is the Combined Type. These children will have significant symptoms of all three characteristics.

What Causes AD/HD?

AD/HD is a neurobiologically-based developmental disability estimated to affect between 3-5% of the school age population (Professional Group for Attention and Related Disorders, 1991). No one knows exactly what causes AD/HD. Scientific evidence suggests that the disorder is genetically transmitted in many cases and results from a chemical imbalance or deficiency in certain neurotransmitters, which are chemicals that help the brain regulate behavior. In addition, a landmark study conducted by the National Institute of Mental Health showed that the rate at which the brain uses glucose, its main energy source, is lower in subjects with AD/HD than in subjects without AD/HD (Zametkin et al., 1990).

Even though the exact cause of AD/HD remains unknown, we do know that AD/HD is a neurologically-based medical problem. Parents and teachers do not cause AD/HD. Still, there are many things that both can do to help a child manage his or her AD/HD-related difficulties. Before we look at what needs to be done, however, let us look at what AD/HD is and how it is diagnosed.

What Are the Signs of AD/HD?

Professionals who diagnose AD/HD use the diagnostic criteria set forth by the American Psychiatric Association (1994) in the Diagnostic and Statistical Manual of Mental Disorders; the fourth edition of this manual, known as the DSM-IV, was released in May 1994. The criteria in the DSM-IV (discussed below) and the other essential diagnostic features listed in the box labeled "Defining Attention-Deficit/ Hyperactivity Disorder" are the signs of AD/HD. As can be seen, the primary features associated with the disability are inattention, hyperactivity, and impulsivity. The discussion below describes each of these features and lists their symptoms, as given in the DSM- IV.

Inattention

A child with AD/HD is usually described as having a short attention span and as being distractible. In actuality, distractibility and inattentiveness are not synonymous. Distractibility refers to the short attention span and the ease with which some children can be pulled off-task. Attention, on the other hand, is a process that has different parts. We focus (pick something on which to pay attention), we select (pick something that needs attention at that moment) and we sustain (pay attention for as long as is needed). We also resist (avoid things that remove our attention from where it needs to be), and we shift (move our attention to something else when needed).

When we refer to someone as distractible, we are saying that a part of that person's attention process is disrupted. Children with AD/HD can have difficulty with one or all parts of the attention process. Some children may have difficulty concentrating on tasks (particularly on tasks that are routine or boring). Others may have trouble knowing where to start a task. Still others may get lost in the directions along the way. A careful observer can watch and see where the attention process breaks down for a particular child.

Symptoms of inattention, as listed in the DSM-IV, are:

- (a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities;
- (b) often has difficulty sustaining attention in tasks or play activities;
- (c) often does not seem to listen when spoken to directly;
- (d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions);
- (e) often has difficulty organizing tasks and activities;
- (f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework);
- (g) often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools);
- (h) is often easily distracted by extraneous stimuli;
- (i) is often forgetful in daily activities. (American Psychiatric Association, 1994, pp. 83-84)

Hyperactivity

Excessive activity is the most visible sign of AD/HD. The hyperactive toddler/preschooler is generally described as "always on the go" or "motor driven." With age, activity levels may diminish. By adolescence and adulthood, the overactivity may appear as restless, fidgety behavior (American Psychiatric Association, 1994).

Symptoms of hyperactivity, as listed in the DSM-IV, are:

- (a) often fidgets with hands or feet or squirms in seat;
- (b) often leaves seat in classroom or in other situations in which remaining seated is expected;
- (c) often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness);
- (d) often has difficulty playing or engaging in leisure activities quietly;
- (e) is often "on the go" or often act as if "driven by a motor;"
- (f) often talks excessively. (APA, 1994, p. 84)

Impulsivity

When people think of impulsivity, they most often think about cognitive impulsivity, which is acting without thinking. The impulsivity of children with AD/HD is slightly different. These children act before thinking, because they have difficulty waiting or delaying gratification. The impulsivity leads these children to speak out of turn,

interrupt others, and engage in what looks like risk-taking behavior. The child may run across the street without looking or climb to the top of very tall trees. Although such behavior is risky, the child is not really a risk-taker but, rather, a child who has great difficulty controlling impulse. Often, the child is surprised to discover that he or she has gotten into a dangerous situation and has no idea of how to get out of it.

Symptoms of impulsivity, as listed in the DSM-IV (p. 84), are:

- (g) often blurts out answers before questions have been completed;
- (h) often has difficulty awaiting turn;
- (i) often interrupts or intrudes on others (e.g., butts into conversations or games).

It is important to note that, in the DSM-IV, hyperactivity and impulsivity are no longer considered as separate features. According to Barkley (1990), hyperactivity-impulsivity is a pattern stemming from an overall difficulty in inhibiting behavior.

In addition to problems with inattention or hyperactivity-impulsivity, the disorder is often seen with associated features. Depending on the child's age and developmental stage, parents and teachers may see low frustration tolerance, temper outbursts, bossiness, difficulty in following rules, disorganization, social rejection, poor self-esteem, academic underachievement, and inadequate self-application (American Psychiatric Association, 1994).

Defining Attention Deficit/Hyperactivity Disorder*

Instead of a single list of 14 possible symptoms as listed in the prior edition of the DSM (the DSM-III-R), the DSM-IV categorically sorts the symptoms into three subtypes of the disorder:

- Combined Type -- multiple symptoms of inattention, impulsivity, and hyperactivity;
- Predominantly Inattentive Type -- multiple symptoms of inattention with few, if any, of hyperactivity-impulsivity;
- Predominantly Hyperactive-Impulsive Type -- multiple symptoms of hyperactivity-impulsivity with few, if any, of inattention.

Other essential diagnostic features of AD/HD include:

- Symptoms of inattention, hyperactivity, or impulsivity must persist for at least six months and be maladaptive and inconsistent with developmental levels;
- Some of the symptoms causing impairment must be present before age 7 years;
- Some impairment from the symptoms is present in two or more settings (e.g., at school/work, and at home);
- Evidence of clinically significant impairment is present in social, academic, or occupational functioning;
- Symptoms do not occur exclusively during the course of Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorder, or Personality Disorder).

Don't All Children Show These Signs Occasionally?

From time to time, all children will be inattentive, impulsive, and overly active. In the case of AD/HD, these behaviors are the rule, not the exception. When a child exhibits the behaviors listed above as symptomatic of AD/HD, even if he or she does so consistently, do not draw the conclusion that the child has the disorder. Until a proper evaluation is completed, you can only assume that the child might have AD/HD.

Conversely, people have been known to read symptom lists and, finding one or two exceptions, rule out the possibility of the disorder's presence. AD/HD is a disability that, without proper identification and management, can have long-term complications. Parents and teachers are cautioned against making the diagnosis by themselves.

How Do I Know For Sure If My Child Has AD/HD?

Unfortunately, no simple test such as a blood test or urinalysis exists to determine if a child has this disorder. Diagnosing AD/HD is complicated and much like putting together a puzzle. An accurate diagnosis requires an assessment conducted by a well-trained professional (usually a developmental pediatrician, child psychologist, child psychiatrist, or pediatric neurologist) who knows a lot about AD/HD and all other disorders that can have symptoms similar to those found in AD/HD. Until the practitioner has collected and evaluated all the necessary information, he or she must follow the same rule of thumb as the parent or teacher who sees the behavior and suspects that the child has the disorder: Assume the child might have AD/HD.

The AD/HD diagnosis is made on the basis of observable behavioral symptoms in multiple settings. This means that the person doing the evaluation must use multiple sources to collect the information needed. A proper AD/HD diagnostic evaluation includes the following elements:

1. A thorough medical and family history
2. A physical examination
3. Interviews with the parents, the child, and the child's teacher(s)
4. Behavior rating scales completed by parents and teacher(s)
5. Observation of the child
6. A variety of psychological tests to measure I.Q. and social and emotional adjustment, as well as to indicate the presence of specific learning disabilities.

It is important to realize that, almost characteristically, children with AD/HD often behave well in new situations, particularly in those that are one-on-one. Therefore, a well-trained diagnostician knows not to make a determination based solely on how the child behaves during their time together.

Sophisticated medical tests such as EEGs (to measure the brain's electrical activity) or MRIs (an X-ray of the brain's anatomy) are NOT part of the routine assessment. Such tests are usually given only when the diagnostician suspects another problem, and those cases are infrequent. Similarly, positron emission tomography (PET Scan) has recently been used for research purposes but is not part of the diagnostic evaluation.

After completing an evaluation, the diagnostician makes one of three determinations:

1. the child has AD/HD;
2. the child does not have AD/HD but his or her difficulties are the result of another disorder or other factors; or
3. the child has AD/HD and another disorder (called a co-existing condition).

To make the first determination -- that the child has AD/HD -- the professional considers his or her findings in relation to the criteria set forth in the Diagnostic and Statistical Manual of Mental Disorders (4th edition), the DSM-IV, of the American Psychiatric Association (1994). A very important criterion for diagnosis is that the child's symptoms be present prior to age 7. They must also be inappropriate for the child's age and cause clinically significant impairment in social and academic functioning.

To make the second determination -- that the child's difficulties are the result of another disorder or other factors -- the professional considers the exclusionary criteria found in the DSM-IV and his or her knowledge of disorders with similar symptomatology. According to the DSM-IV, "Attention-Deficit/Hyperactivity Disorder is not diagnosed if the symptoms are better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorder, Personality Disorder, Personality Change Due to a General Medical Condition, or a Substance-Related Disorder). In all these disorders, the symptoms of inattention typically have an onset after age 7 years, and the childhood history of school adjustment generally is not characterized by disruptive behavior or teacher complaints concerning inattentive, hyperactive, or impulsive behavior" (American Psychiatric Association, 1994, p. 83).

Furthermore, psychosocial stressors, such as parental divorce, child abuse, death of a loved one, environmental disruption (such as change in residence or school), or disasters can result in temporary symptoms of inattention, impulsivity, and overactivity. Under these circumstances, symptoms generally arise suddenly and, therefore, would have no long-term history. Of course, a child can have AD/HD and also experience psychosocial stress, so such events do not automatically rule out the existence of AD/HD.

To make the third determination -- that the child has AD/HD and a co-existing condition -- the assessor must first be aware that AD/HD can and often does co-exist with other difficulties, particularly learning disabilities, oppositional defiant disorder, and conduct disorder. All factors must be considered to ensure the child's difficulties are evaluated and managed comprehensively.

Clearly, diagnosis is not as simple as reading a symptom list and saying, "This child has AD/HD!" This Briefing Paper explores the issue of diagnosis in some depth, because no one wants children to be misdiagnosed. As parents, the more we know, the more we can help our children to succeed. We probably do not need to know how to use the DSM-IV. We probably do need to know that the person evaluating our child is using the specified criteria for AD/HD and all the components of a comprehensive assessment.

How Do I Have My Child Evaluated for AD/HD?

When a child is experiencing difficulties which suggest that he or she may have AD/HD, parents can take one of two basic paths to evaluation. They can seek the services of an outside professional or clinic, or they can request that their local school district conduct an evaluation.

In pursuing a private evaluation or in selecting a professional to perform an assessment for AD/HD, parents should consider the clinician's training and experience with the disorder, as well as his or her availability to coordinate the various treatment approaches. Most AD/HD parent support groups have knowledge of clinicians trained to evaluate and treat children with AD/HD. Parents may also consult their child's pediatrician, community mental health center, university mental health clinics, or hospital child evaluation units.

It is important for parents to realize, however, that the schools have an affirmative obligation to evaluate a child (aged 3-21) if school personnel suspect that he or she might have AD/HD or any other disability that is adversely affecting educational performance. This evaluation is provided free of charge to families and must, by law, involve more than one standardized test or procedure.

Thus, if you suspect that your child has an attentional or hyperactivity problem, or know for certain that your child has AD/HD, and his or her educational performance appears to be adversely affected, you should first request that the school system evaluate your child. When making this request, it is a good idea to be as specific as possible about the kinds of educational difficulties your child is experiencing.

If your child is an infant or toddler, you may want to investigate what early intervention services are available in your state through the Part H program of the Individuals with Disabilities Education Act (IDEA). You can find out about the availability of these services in your state by contacting the State Department of Education or local education agency (both of which are listed on NICHCY's State Resource Sheet), by asking your pediatrician, or by contacting the nursery or child care department in your local hospital. While your state may not specifically list AD/HD as a disability to be addressed through the Part H program, most states have a category such as "atypical children" or "other" under which an AD/HD assessment might be made.

Preschoolers (children aged 3-5) may be eligible for services under Part B of the IDEA. If your child is a preschooler, you may wish to contact the State Department of Education or local school district, ask your pediatrician, or talk with local day care

providers about how to access special education services in order to have your child assessed.

Also, under the 1993 Head Start regulations, AD/HD is considered a chronic or acute health impairment entitling the child to special education services when the child's inattention, hyperactivity, and impulsivity are developmentally inappropriate, chronic, and displayed in multiple settings, and when the AD/HD severely affects performance in normal developmental tasks (for example, in planning and completing activities or following simple directions).

If your child is school-aged, and you suspect that AD/HD may be adversely affecting his or her educational performance, you can ask your local school district to conduct an evaluation. With the exception of the physical examination, the assessment can be conducted by the child study team, provided a member of the team is knowledgeable about assessing Attention-Deficit/Hyperactivity Disorder. If not, the district may need to utilize an outside professional consultant trained in the assessment of AD/HD. This person must know what to look for during child observation, be competent to conduct structured interviews with the parent, teacher(s), and child, and know how to administer and interpret behavior rating scales.

Identifying where to go and whom to contact in order to request an evaluation is just the first step in the process. Unfortunately, many parents experience difficulty in the next step -- getting the school system to agree to evaluate their child. If the school district does not believe that the child's educational performance is being adversely affected, it may refuse to evaluate the child. In this case, parents may wish to pursue a private evaluation. It is also important to persist with the school, enlisting the assistance of an advocate, if necessary. Parents can generally find this type of assistance by contacting the Parent Training and Information (PTI) center for their state, the Protection and Advocacy (P&A) agency, or the local parent group. A school district's refusal to evaluate a child suspected of having AD/HD involves issues that must be addressed on an individual basis; these organizations will typically be able to provide information on parents' legal rights, offer direct assistance, in many cases, and give specific suggestions on how to proceed.

For children who are evaluated by the school system, eligibility for special education and related services will be based upon evaluation results and the specific policies of the state. Many parents have found this to be a problematic area as well, and so eligibility for special education services is discussed in greater detail towards the end of this Briefing Paper. For the moment, however, let us look at what we know about managing AD/HD and the specific difficulties associated with the disorder.

How is AD/HD Treated?

No cure or "quick fix" exists to treat AD/HD. The symptoms, however, can be managed through a combination of efforts. Management approaches need to be designed to assist the child behaviorally, educationally, psychologically, and, in many instances, pharmacologically.

Called multi-modal management, this approach consists of four basic parts: education about and understanding of AD/HD, behavior management, appropriate educational interventions, and, frequently, medication. In some instances, individual or family counseling is also advised.

Understanding AD/HD

AD/HD has been called an environmentally dependent disability. The significant people in the life of those who have AD/HD need to understand that difficulties will rise and fall in relation to the environment's demands and expectations. Problems often arise in environments where children are expected to be seen and not heard, to pay careful attention, and to use great self-control. Often, when children with AD/HD fall short of meeting these expectations, we try to change the children, rather than changing aspects of the environment, including our actions and reactions.

Parents and teachers need to be aware of the symptoms of AD/HD and how those symptoms impact the child's ability to function at home, in school, and in social situations. When the adults in the child's life understand the nature of the disorder, they will be able to structure situations to enable the child to behave appropriately and achieve success. Remember, the child who has difficulty with attention, impulse control, and in regulating physical activity needs help and encouragement to manage these problems.

From a thorough understanding of AD/HD comes a change in the way the child's behavior is viewed. This change sets the stage for the effective use of the other components of the AD/HD management system.

Behavior Management

The main goal of all behavior management strategies is to increase the child's appropriate behavior and decrease inappropriate behavior. The best way to influence any behavior is to pay attention to it. The best way to increase a desirable behavior is to catch the child being good.

Behavior is defined as a specific act or actions. When thinking about managing behavior, many people focus on the act or actions. In actuality, behavior management is much broader. It takes into account that, before a specific act or action occurs, there is something that sets the stage for the act to happen (called an antecedent), and something that follows which either encourages or discourages a repetition of the act (called a consequence). Behavior management involves changing the antecedents and consequences so that the child's behavior changes.

Whether at home or in school, children with AD/HD respond best in a structured, predictable environment. Here, rules and expectations are clear and consistent, and consequences are set forth ahead of time and delivered immediately. Demands are limited. Rewards are plenty. Praise is frequent. Negative feedback is minimal.

By establishing structure and routines, preparing the child for changes in the routine, building opportunities for the child to be successful, setting consequences ahead of time, and anticipating where difficulties may arise, parents and teachers can change the antecedents and cultivate an environment that encourages the child to behave appropriately. When adults in the child's life do what they say they are going to do, and do so on a consistent basis so that the child knows their word has meaning, then they are providing the consequences to encourage the child to continue behaving appropriately, plus discouraging any undesired behavior.

Behavior management is a skill. It requires practice -- and it requires patience. Changing behavior takes time.

Behaviorally trained professionals often encourage the use of behavior modification charts. Charts are designed to provide the child with a clear picture of what behaviors are expected. The child then has the choice of whether to meet those expectations. Parents or teachers provide feedback to the child about his or her choices by delivering consequences. Charts provide high motivation and enable the child to develop an internal sense of self-control -- specifically, that he or she can behave appropriately.

There are two basic types of chart programs. (1) Token Economy -- Here, the child earns tokens (chips, stickers, stars) for appropriate behavior. Tokens can be exchanged for various rewards. (2) Response Cost -- In this chart program, the child is given tokens for free. Tokens are withdrawn for inappropriate behavior (e.g., out of seat, off-task, etc.).

The most effective programs use both types of chart systems and work on a give-and-take basis. In this combination system, the child is given a token for behaving appropriately and loses a token when misbehaving.

When creating and implementing a behavior modification chart, you may wish to follow these suggestions:

- Make a list of problematic behaviors or ones that need improving.
- Select the behaviors to be modified. Parents (or teachers), with input from the child, review the list of problematic behaviors and select three, four, or five to work on at a given time. The behaviors charted should be ones that occur daily, such as going to bed on time, doing homework, or getting ready for school on time.
- Design a reward system (Token Economy, Response Cost, or a combination). Parents (or teachers) need to pay attention to the child's behavior throughout the course of the day and provide frequent rewards when the child behaves appropriately. At the end of the day, tokens can be exchanged for rewards, such as extended bed time, playing a game with Mom or Dad, or a favorite snack. Remember, a reward is only effective when it has value to the child. Rewards might have to be changed frequently.

About Punishment: Children with AD/HD respond best to motivation and positive reinforcement. It is best to avoid punishment. When punishment is necessary, use it sparingly and with sensitivity. It is important for parents and teachers to respond to this child's inappropriate behavior without anger and in a matter-of-fact way. These children need to be taught to replace inappropriate behavior with appropriate behavior.

About Time-out: When the child is misbehaving or out of control, time-out is an effective way to manage the problem. Time-out means the child is sent to a predetermined location for a short period of time. A place out of the mainstream of activity is best; for example, one particular chair may be specified as the time-out chair. The time-out location should not be a traumatic place, such as a closet or dark basement. The purpose of time-out is to provide the child with cooling-off period wherein he or she can regain control.

An important aspect to time-out is that the child no longer has the privilege of choosing where he or she would like to be or how time is spent. In general, the child stays in time-out and must be quiet for five minutes. Preschool-aged children are usually given two or three minutes in time-out. For toddlers, 30 seconds to a minute is appropriate.

Medication

Medication has proven effective for many children with AD/HD. Most experts agree, however, that medication should never be the only treatment used. The parents' decision to place a child on medication is a personal one and should be made after a thorough evaluation of the child has taken place and after careful consideration by both the parents and the physician.

Stimulants are the medication most widely prescribed for AD/HD. These drugs -- for example, Ritalin (the most widely used), Dexedrine, Cylert -- are believed to stimulate the action of the brain's neurotransmitters, which enables the brain to better regulate attention, impulse, and motor behavior. In general, the short-acting stimulant medications (e.g., Ritalin, Dexedrine) have few and mild side effects. For children who cannot take stimulant drugs, anti-depressant medications or Clonidine are used.

The prescribing physician should explain the benefits and drawbacks of medication to the parents and, when appropriate, to the child. Doses are generally administered gradually, so that the child receives the lowest dose needed to achieve the best therapeutic benefit. Parents should dispense the medication as prescribed and monitor closely how their child responds to the medication, including side effects. Such monitoring generally includes feedback from the child's teacher(s), which is usually based on the use of behavior rating scales. Parents should communicate with the physician as often as is necessary to determine when medication has reached the proper level for the child, and to discuss any problems or questions.

A note of caution: Many parents and teachers have heard that mega-vitamins, chiropractic scalp massage, visual/ocular motor training, biofeedback, allergy treatments, and diets are useful treatments for AD/HD. However, these treatments have not been recommended by AD/HD experts for the simple reason that they have not stood up under careful scientific scrutiny. As their child's primary caregivers and advocates, parents need to become informed consumers and exercise caution when considering such treatments.

Educational Intervention

Many children with AD/HD experience the greatest difficulty in school, where demands for attention and impulse and motor control are virtual requirements for

success. Although AD/HD does not interfere with the ability to learn, it does wreak havoc on performance. Thus, in the school arena, AD/HD is an educational performance problem. When little or nothing is done to help these children improve their performance, over time they will evidence academic achievement problems. This underachievement is not the result of an inability to learn. It is caused by the cumulative effects of missing important blocks of information and skill development that build from lesson to lesson and from one school year to the next.

Generally, AD/HD will affect the student in one or more of the following performance areas:

- starting tasks,
- staying on task,
- completing tasks,
- making transitions,
- interacting with others,
- following through on directions,
- producing work at consistently normal levels, and
- organizing multi-step tasks.

Those teaching or designing programs for these students need to pinpoint where each student's difficulties occur. Otherwise, valuable intervention resources may be spent in areas where they are not critical. For example, one child with AD/HD may have difficulty starting a task because the directions are not clear, while another student may fully understand the directions but have difficulty making transitions and, as a result, get stuck in the space where one task ends and another begins. With the first child, intervention needs to focus upon making directions clear and in helping the child to understand those directions. The second child would need help in making transitions from one activity to another.

The sooner educational interventions begin, the better. They should be started when educational performance problems become evident and not delayed because the child is still holding his or her own on achievement tests.

Specific suggestions for educational intervention are presented below.

Guidelines for Educational Intervention

Here are several general guidelines for improving the social and academic performance of children with AD/HD in both regular and special education settings.

** Place the student with teachers who are positive, upbeat, highly organized problem-solvers. Teachers who use praise and rewards liberally and who are willing to go the extra mile to help students succeed can be enormously beneficial to the student with AD/HD.

** Provide the student with a structured and predictable environment. As part of this environment:

- display rules

- post daily schedules and assignments
- call attention to schedule changes
- set specific times for specific tasks
- design a quiet work space for use upon request
- seat the child with positive peer models
- plan academic subjects for morning hours
- provide regularly scheduled and frequent breaks
- use attention-getting devices (e.g., secret signals, color codes, etc.)

** Modify the curriculum. In many cases, AD/HD students can benefit from the less is more maxim. That is to say, if the student can demonstrate proficiency in 10 problems, 20 do not need to be assigned. Curriculum modification can also include:

- mixing high and low interest activities;
- providing computerized learning materials;
- simplifying and increasing visual presentations;
- teaching organization and study skills;
- using learning strategies such as mnemonic devices and links; and
- using visual references for auditory instruction.

Additional Principles of Remediation

These guidelines were designed by Sydney Zentall, Ph.D. (1991).

** For Excessive Activity:

-- Channel activity into acceptable avenues. For example, rather than attempting to reduce a student's activity, teachers can encourage directed movement in classrooms when it is not disruptive, or allow standing during seatwork, especially at the end of a task.

-- Use activity as a reward. For example, to reward a child's appropriate behavior or improvement, a teacher might allow him or her to run an errand, clean the board, organize the teacher's desk, or arrange the chairs in the room.

-- Use active responses in instruction. Teaching activities that encourage active responses such as talking, moving, organizing, or working at the board are helpful to many students with AD/HD, as are activities such as writing in a diary or painting.

** Inability to Wait:

-- Give the child substitute verbal or motor responses to make while waiting. This might include teaching the child how to continue on easier parts of a task (or a substitute task) while waiting for the teacher's help.

-- When possible, allow daydreaming or planning while the child waits. For example, the child might be allowed to doodle or play with clay while waiting, or might be guided to underline or write directions or relevant information.

-- When inability to wait becomes impatience or bossiness, encourage leadership. Do not assume that impulsive statements or behavior are aggressive in intent. Suggest alternative ways or behaviors (e.g., line reader, paper passer). It may be important to cue a student when an upcoming task will be difficult and extra control will be needed.

**** Failure to Sustain Attention to Routine Tasks and Activities:**

- Decrease the length of the task. There are many ways to do this, including breaking one task into smaller parts to be completed at different times or giving fewer spelling words or math problems.
- Make tasks interesting. Teachers can heighten interest in tasks by allowing students to work with partners or in small groups, by using an overhead projector, and by alternating high and low interest activities. Make a game out of checking work, and use games to overlearn rote material.

**** For Noncompliance and Failure to Complete Tasks:**

- Generally increase the choice and specific interest of tasks for the child. Teachers may allow the student with AD/HD a limited choice of tasks, topics, and activities. Teachers may also find it useful to determine which activities the student prefers and to use these as incentives.
- Make sure tasks fit within the student's learning abilities and preferred response style. Students are more likely to complete tasks when they are allowed to respond in various ways (e.g., typewriter, computer, on tape) and when the difficulty of assignments varies (i.e., not all tasks are equally difficult). It is important to make sure that disorganization is not the reason the student is failing to complete tasks.

**** Difficulty at the Beginning of Tasks:**

- Increase the structure of tasks and highlight important parts. This includes encouraging note-taking; giving directions in writing as well as orally; stating the standards of acceptable work as specifically as possible; and pointing out how tasks are structured (e.g., topic sentences, headers, table of contents).

**** For Completing Assignments on Time:**

- Increase the student's use of lists and assignment organizers (notebooks, folders), write assignments on the board, and make sure that the student has copied them.
- Establish routines to place and retrieve commonly used objects such as books, assignments, and clothes. Pocket folders are helpful here; new work can be placed on one side and completed work on the other. Parents can be encouraged to establish places for certain things (books, homework) at home. Students can be encouraged to organize their desk or locker with labels/places for certain items.
- Teach the student that, upon leaving one place for another, he or she will self-question, "Do I have everything I need?"

What about Special Education?

The type of special education services a child receives will depend upon the nature and severity of his or her difficulties. Not all of these children will need special education services. And not all of these children can receive an appropriate education without special education services. Decisions about children's need for special education and their subsequent placement must be made on a case-by-case basis.

A series of steps is typically necessary in order for the child to receive special education services. First, the child must be experiencing educational performance problems. Second, when such problems become evident, the parent or teacher can refer the child

to the local school district's child evaluation team and request an evaluation. Third, an evaluation is performed to determine if the child does indeed have a disability according to eligibility criteria set forth in state and federal law and if that disability is adversely affecting the child's educational performance. If so, the child may then be found eligible for special education services.

When a child is found eligible for special education, his or her parents collaborate with school personnel to develop an Individualized Education Program (IEP) designed to address the child's specific problems and unique learning needs. Here, strengths are considered as well. Strategies to improve social and behavioral problems are also addressed in the IEP. After specifying the nature of the child's special needs, the IEP team, including parents, determines what types of services are appropriate for addressing those needs and whether these services will be delivered in the regular education classroom or elsewhere (such as the resource room or through individualized attention).

Researchers estimate that half of the children with AD/HD will be able to perform to their ability levels without special education services, provided the disorder is recognized, understood, and curriculum adjustments to the regular program of instruction are made.

The majority of children with AD/HD who require special education services (approximately 35%-40%) will receive them through combined placements which might include the regular education classroom, with or without in-class support, and the resource room. Support personnel are likely to be used as case managers and consultants to regular education teachers.

Some children (approximately 10%) may need to be served in a self-contained classroom with minimal mainstreaming. Such children are likely to have severe AD/HD and will probably have co-existing conditions as well.

What Do I Do If My Child Is Found Ineligible for Services?

The eligibility of AD/HD children for special education services is an area of great concern to schools, parents, and advocates alike. Every year, NICHCY receives hundreds of telephone calls from parents whose children have been found ineligible for services, despite the fact that they have AD/HD. Accordingly, this section looks at what the laws have to say about the legal rights of children with AD/HD to special education.

The primary law under which schools evaluate children for special education, and then provide services to those they find eligible, is called the Individuals with Disabilities Education Act, or IDEA. This law entitles children with disabilities to a free appropriate public education by mandating special education and related services for students who meet eligibility requirements. In order for a student to be eligible, he or she must have a disability according to the criteria established in state or federal law, or be suspected of having such a disability, and that disability must adversely affect his or her educational performance. Thus, a medical diagnosis of AD/HD alone is not sufficient to render a child eligible for services. Educational performance must be adversely affected.

Presently, the IDEA lists 13 categories of disability under which a child might be found eligible for special education services. Your child must meet the criteria for one of these categories.

In accordance with federal law, each state has to have a state law that entitles students with disabilities to a free appropriate public education. All state special education laws must meet the standards of federal law. Local school districts, then, must follow the state law and its accompanying rules and regulations. Yet many local school districts may not understand their obligation to provide special education to children with AD/HD in cases where the disability adversely affects the student's educational performance.

As a result of the considerable confusion in the field, the U.S. Department of Education has issued two memoranda intended to clarify state and local responsibility under federal law for addressing the needs of children with AD/HD in the schools. The first memorandum, issued in 1991, states that "children with ADD should be classified as eligible for services under the "other health impaired" category in instances where the ADD is a chronic or acute health problem that results in limited alertness, which adversely affects educational performance" (U.S. Department of Education, 1991, p. 3). Children with AD/HD are also eligible for services under any other category, if they meet the criteria established for those disabilities -- for example, "specific learning disabilities."

According to the memorandum, students with AD/HD might also be eligible for services under Section 504 of the Rehabilitation Act of 1973. Section 504 is a civil rights statute prohibiting discrimination on the basis of disability by recipients of federal funds. Under Section 504, a person with a disability means any person with an impairment that "substantially limits one or more major life activities." Because "learning" is included in Section 504's definition of "major life activities," many students with AD/HD qualify as a person with a disability. Schools are then required to provide them with a "free appropriate public education," which can include regular or special education and related services, depending upon each student's specific needs.

Therefore, if a school district finds a child ineligible for services under the IDEA, there are a number of actions parents can take to have this decision re-considered. Parents may:

- Ask the school system for information about parent rights and the appropriate procedures for appealing the decision, including mediation and due process. Due process is a right under the IDEA. State and local laws will specify the procedures to be followed, as required by the IDEA.
- Ask to have their child evaluated under the criteria of Section 504. Many children who have not met eligibility criteria under IDEA do meet those under Section 504.
- Contact sources of assistance. Each state has a Parent Training and Information Center (PTI) that is an excellent resource of information about state policy, state disability definitions, appeal procedures, and legal requirements of both IDEA and

Section 504. Another resource available to parents, particularly those in disagreement with the school system, is the Protection and Advocacy (P&A) Agency within the state, which can provide guidance and assistance. Both of these organizations are listed on the NICHCY State Resource Sheet. Trained advocates with private consulting businesses also exist in many areas.

- Become familiar with federal and state laws regarding special education and the rights of children with disabilities. Numerous resources can provide this information, including NICHCY's Questions and Answers About the Individuals with Disabilities Education Act (1993).

How Can I Help My Child Improve Self-Esteem?

Most undiagnosed and untreated children with AD/HD suffer from low self-esteem. Many will also show signs of being mildly depressed. These feelings stem from the child's sense of personal failure. For the child with AD/HD, the world is often an unkind place. Negative feedback in the form of punishment or blame tends to be a constant in this child's life. Early diagnosis and treatment help to stem the feelings of poor self-esteem.

To encourage a good sense of self, this child must be helped to recognize personal strengths and to develop them. Using many of the behavior management techniques and intervention strategies described in this document will help. The child's self-esteem will improve when he or she feels competent. These are not children who can't, or won't. They can, and do. It's just that "can" and "do" come harder for them.

Ways to Improve Life in General and the Self-Esteem of Children with AD/HD

Become Proactive. Knowledge is power. Gain knowledge about the disability so you understand why and how ADD affects the child at home, in school, in social situations, and the entire family system.

Change Your Belief System. Before the child can change his or her self-concept, the adults in the child's life have to change the way they view the child. Separate the child from the behavior, and then separate the child from the disability. These are not ADD children. They are children with ADD.

Act, Don't React. Emotional responses such as blame and anger will diminish when you stop, look, listen, and then respond. In other words, count to ten.

Nurture Yourself. Take time alone with your spouse, develop an interest or hobby, establish a regular exercise program : be good to yourself.

Catch The Child Being Good. Give your child lots of praise, encouragement, recognition, and positive attention. Reward the child for meeting expectations. Use punishment sparingly, and never ridicule the child.

Develop The Child's Sense of Competence and Responsibility.

** Identify the child's strengths and weaknesses.

** Develop realistic expectations of the child.

** Play to the child's strengths by building opportunities for success in the environment. Remember, you may have to structure situations carefully to make success achievable.

--- Assign special jobs (feeding the family pet, mowing the lawn, decorating the house for holidays).

--- Cultivate the child's special interests (help start a card or doll collection, take trips to museums).

--- Enroll the child in extracurricular activities (sports, performing arts). Finding an activity best suited to your child may require trial and error. Encourage the child by attending practices and performances.

--- Play with your child. Let the child choose and direct the game or activity and, if not too obvious, let the child win. "I think I can. I think I can," said the little red engine. And he could.

Where Can I Find a Parent Support Group?

For those parents, teachers, and children challenged by this disorder, AD/HD can be a truly unique experience. While some days the struggles seem insurmountable, it's important for parents to realize that, when AD/HD is properly managed, these children and youth can and do turn their liabilities into assets.

Until such time, help and hope are available. AD/HD parent support groups exist in every state. For information about a group in your area, contact CH.A.D.D. (Children and Adults with Attention Deficit Disorders) at 499 NW 70th Avenue, Suite 109, Plantation, FL 33317, Telephone: (305) 587-3700. If there is no parent support group in your area, the CH.A.D.D. staff can give you guidance in how to start a group. In addition, CH.A.D.D. offers many publications, including CH.A.D.D.er Box and Attention!

Organizations

CH.A.D.D. (Children and Adults with Attention Deficit/Hyperactivity Disorder)

8181 Professional Place

Suite 201

Landover, MD 20785

(301) 306-7070

(800) 233-4050

E-mail: national@chadd.org

Web site: www.chadd.org

National Attention Deficit Disorder Association (ADDA)

P.O. Box 1303
Northbrook, IL 60065-1303
E-mail: mail@add.org
Web site: www.add.org

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